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(54) [Title of the Invention] LIP COAT

(57) [Abstract]
[Objective] To provide a lip coat that, when applied on top of conventional lipstick, prevents the lipstick from coming off, i.e., gives it good lasting power, is not sticky, is easy to remove when removing the makeup, and does not irritate the lips.
[Constitution] A blend of 10-80 percent by weight of an alkylsiloxysilicate component, a solid silicone having the structure $(R_3Si)_2O \cdot nSiO_2$ (R = alkyl group), where the alkyl group is a methyl group (CH_3-) and/or ethyl group (C_2H_5-), and 20-90 percent by weight of a low-viscosity silicone oil component with a viscosity of no more than 10 cs (25°C).

[Claims]

[Claim 1] Lip coat characterized by the fact that it contains component (a), which is provided with the structure described hereinbel w, and component (b):

(a) a solid alkylsiloxysilicate

(b) a l w-viscosity silicone oil with a viscosity of no more than 10 cs (25°C).

Structure of (a) R= Alkyl group

$(R_3Si)_2O\ nSiO_2$

[Claim 2] Lip coat in Claim 1, wherein the alkylsiloxysilicate's alkyl group is a methyl group (CH_3-) and/or ethyl group (C_2H_5-), and *n* ranges from 1 to 5.

[Claim 3] Lip coat in Claims 1 and 2, characterized by the fact that it contains 10-80 percent by weight of component (a) and 20-90 percent by weight of component (b).

[Detailed Description of the Invention]

[0001]

[Industrial Field of Application] The present invention relates to lip coats. More specifically, it relates to lip coats in which a cosmetic containing a combination of solid alkylsiloxysilicate and low-viscosity silicone oil with no more than a specified viscosity is applied on top of conventional lipstick. The lip coat prevents lipstick from coming off, i.e., gives it good lasting power, is not sticky, is easy to remove when removing makeup, and does not irritate the lips.

[0002]

[Prior Art] Products known as lip coat or lip sealer are applied on top of lipstick to prevent the lipstick from coming off, i.e., to improve its lasting power. Resin-type, wax-type, and latex-type lip coats, comprising a film-forming agent, solvent, and film-adjusting agent, are known in the prior art.

[0003] It is known to use components listed in standards such as *Cosmetic Materials* (*Standards for Cosmetic Materials* [*Keshohin Genryo Kijun*]) and *Unlisted Cosmetic Materials* (*Components not Listed in the Standards for Cosmetic Materials* [*Keshohin Genryo Kijun-gai Seibun Kikaku*]) in the prior art lip coats. (1) Resin-type lip coat comprises organic solvent such as ethyl alcohol or isopropyl alcohol as the solvent; resin soluble in the solvent such as shellac, rosin, or rosin ester as the film-forming agent; and polyhydric alcohol soluble in the s lvent such as glycerol or propylene glycol and/or oil soluble in the solvent such as animal or vegetable oil, for example, mink oil, castor oil, and avocado oil, synthetic ester, or the like as the film-adjusting agent.

[0004] (2) Wax-type lip coat comprises low-melting-point is paraffin as a solvent; wax soluble in the solvent such as ceresin, carnauba wax, or microcrystalline wax as the film-forming agent; and oil soluble in the solvent [such as] animal or vegetable oil, for example, squalane, lanolin, jojoba oil, or petroleum jelly, or synthetic ester as the film-adjusting agent.

[0005] (3) Latex-type lip coat c mprises water as the solvent; a latex or emulsion latex such as ethyl acrylate-ethyl methacrylate copolymer, octyl acrylate-styrene copolymer, or methyl methacrylate-butyl acrylate-octyl acrylate copolymer as the film-forming agent; and polyhydric alcohol soluble in the solvent such as glycerol and propylene glycol as the film-adjusting agent.

[0006]

[Problems To Be Solved by the Invention] H wever, such lip coats known in the art are not satisfactory because they do not prevent lipstick from coming off, i.e., they do not give lipstick lasting power, and they promote stickiness, are difficult to remove when removing makeup, irritate the lips, and peel from the underlying makeup. Thus, the industry desires the development of a lip coat that, when applied on top of lipstick, prevents lipstick from coming off, i.e., gives it good lasting power, is not sticky, is easy to remove when removing makeup, and does not irritate the lips.

[0007]

[Means of Solving the Problems] The inventors devoted extensive research aimed at overcoming these problems. As a result, they discovered that a lip coat which, when applied on top of lipstick, prevents the lipstick from coming off, i.e., gives it good lasting power, is not sticky, is easy to remove when removing makeup, and does not irritate the lips can be obtained by combining solid alkylsiloxysilicate as part or all of the lip coat's film-forming agent, low-viscosity silicone oil as part or all of the solvent, and a synthetic ester soluble in low-viscosity silicone oil as the film-adjusting agent or by combining alkylsiloxysilicate as part or all of the film-forming agent and low-viscosity silicone oil as part or all of the solvent. This discovery led to the present invention. Lip coats featuring a combination of solid alkylsiloxysilicate and low-viscosity silicone oil are unknown in the prior art. Thus, the present invention provides a lip coat characterized by the fact that it contains (a) and (b):

(a) solid alkylsiloxysilicate

(b) low-viscosity silicone oil with a viscosity of no more than 10 cs (25°C).

[0008] The alkylsiloxysilicate (a) used in the present invention is trialkylsiloxysilicate, $(R_3Si)_2O\ nSiO_2$, where the R- alkyl group is a methyl group (CH_3-) and/or ethyl group (C_2H_5-), and *n* ranges from 1 to 5. The substance is solid at room temperature and is usually a predominantly white powder or mass. The low-viscosity silicone oil (b) with a viscosity of no more than 10 cs (25°C) used in the present invention is methyl polysiloxane, which may be a cyclic polymer $[(CH_3)_2SiO]_n$, where *n* ranges from 3 to 6 or a straight-chain polymer $(CH_3)_3SiO-[(CH_3)_2SiO]_n-OSi(CH_3)_3$ [illegible], where *n* ranges from 1 to 12.

[0009] Alkylsiloxysilicate is blended in amounts of preferably 10-80 percent by weight, more preferably 30-60 percent by weight, of the entire composition. If less than 10 percent by weight is used, the effect of the invention is not obtained, and if more than 80 percent by weight is used, the composition loses liquidity, compr mising its utility as a cosmetic. Low-viscosity silicone oil with a viscosity of no more than 10 cs is bl nded in amounts of preferably 20-90 percent by weight, more preferably 40-70 percent by weight, of the entire composition. If l ss than 20% by weight is used, the composition loses liquidity, compromising its utility as

a cosmetic, and if more than 90 percent by w ight is used, too little f the film-forming agent is blended into the composition, and the effect of the invention cannot be obtained. Silicone oil with a viscosity f more than 10 cs (25°C), wax, and the like may be used in addition to the solid alkylsiloxysilicate and low-viscosity silicone oil with a viscosity of no more than 10 cs (25°C), which are the ess ntial components of the lip coat of the invention. In addition, components listed in the publications such as *Cosmetic Materials* and *Unlisted Cosmetic Materials* or components approved for use in cosmetics may be selected as appropriate for blending into the lip coating of the invention, examples including approved pigments, synthetic ster, oil, beauty components, fragrances, antioxidants, preservatives, and ultraviolet absorbers.

[0010]

[Working Examples] Working examples are used hereinbelow to describe the present invention, but the invention is not limited in any way to the formulations or viscosities in the examples.

Working Example 1

Inventive Product 1

Component (Percentage by Weight)	
(1) Trimethylsiloxysilicate	4.50
(2) Decamethylcyclopentasiloxane (4.0 cs)	52.0
(3) Tridecyl isononanoate	3.0
(4) Red No. 225	Trace
Total	100.0

(Manufacturing Method)
a. Melt and mix (1) into (2).
b. Melt and mix (4) into (3).
c. Add "b" to "a" and mix until uniform.
d. Package "c" in containers.

[0011] Working Example 2

Inventive Product 2

Component (Percentage by Weight)	
(1) Trimethylsiloxysilicate	30.0
(2) Octamethylcyclopentasiloxane (2.3 cs)	35.0
(3) Methyl polysiloxane (2.0 cs)	35.0
Total	100.0

(Manufacturing Method)
a. Melt (1) - (3) and mix until uniform.
b. Package "a" in containers.

[0012]

[Reference Examples]

Reference Example 1

Comparative Product 1

Component (Percentage by Weight)	
(1) Shellac	12.0
(2) Ethyl alcohol	84.0
(3) Propylene glycol	4.0
Total	100.0

(Manufacturing Method)
a. Mix and melt (1) into (2).
b. Add (3) to "a" and mix until uniform.
c. Package "b" in containers.

[0013] Reference Example 2

Comparative Product 2

Component (Percentage by Weight)	
(1) Polyethylene powder	10.0
(2) Microcrystalline wax	8.0
(3) Isoparaffin	77.0
(4) Petroleum jelly	5.0
Total	100.0

(Manufacturing Method)
a. Heat and melt (1) and (2) into (3) and (4).
b. Package "a" in containers and cool.

[0014] Reference Example 3

Comparative Product 3

Component (Percentage by Weight)	
(1) Ethyl acrylate-ethyl methacrylate copolymer emulsion	60.0
(2) Water	33.0
(3) Glycerol	7.0
T tal	100.0

(Manufacturing Method)
a. Mix (1) into (2).
b. Mix (3) into "a" until uniform.
c. Package "b" in container.

[0015]
[Evaluation] Inventive Products 1 and 2 obtained in Working Examples 1 and 2, respectively, and Comparative Products 1-3 obtained in Reference Examples 1-3, respectively, were wear-tested by 20 women for evaluation.
(Evaluation Criteria)
Good: 3 points
Fair: 2 points
Poor: 1 point
(Evaluation)
Mean score of at least 2.5 points .... O
Mean score of 1.5-2.5 points .... Δ
Mean score of less than 1.5 points ... ×

[0016]
Evaluation of Working Examples

Items Evaluated	Inventive Product 1 of Working Example	Inventive Product 2 of Working Example
Good lasting power	O	O
Not sticky	O	O
Easy to remove	O	O
Not irritating	O	O

[0017]
Evaluation of Reference Examples

Items Evaluated	Comparative Product 1 of Reference Example	Comparative Product 2 of Reference Example	Comparative Product 3 of Reference Example
Good lasting power	O	Δ	×
Not sticky	Δ	×	×
Easy to remove	×	Δ	Δ
Not irritating	×	×	Δ

In the evaluation, Comparative Product 1 was difficult to remov and showed marked irritation of the lips; Comparative Product 2 was sticky and showed marked irritation of the lips; and Comparative Product 3 was sticky and had poor lasting power. By contrast, the products of the invention showed excellent lasting power, w re not sticky, were easy to remove with the makeup, and did not irritate the lips.

[0018]
[Effect of the Invention] The lip cost of the invention is an extremely useful product that, when applied on top of lipstick, prevents lipstick from coming off, i.e., gives it good lasting power, counteracts stickiness, is easy t remove with the makeup, and does not irritate the lips.